

ANNOTATIONES ZOOLOGICAE JAPONENSES

Volume 43, No. 2—June 1970

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Published by the Zoological Society of Japan  
Zoological Institute, Tokyo University

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Studies on the Mesostigmatid Mites in Japan  
III. Family Podocinidae BERLESE

*With 29 Text-figures*

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(Communicated by T. UCHIDA)

**ABSTRACT** Three new species of *Podocinum* are described from Japan: *Podocinum tsushmanum* n. sp., *P. catenum* n. sp. and *P. aokii* n. sp. *Podocinum pacificum* BERLESE are recorded. A key to the four known species is given in this paper.

The family Podocinidae BERLESE comprise two genera *Podocinum* BERL. and *Podocinella* EVANS et HYATT 1957. The genus *Podocinum* was proposed by BERLESE in 1882 for *Laelaps sagax* from Italy. In 1957, EVANS and HYATT described ten species of *Podocinum*, including six new species and three species of *Podocinella*, of which two were new to science. There has been hitherto recorded only one species, *Podocinum pacificum* BERL., in Japan. In the present paper are dealt with four species as follows: *P. pacificum* BERL., *P. tsushmanum* n. sp., *P. catenum* n. sp. and *P. aokii* n. sp. The type-series are partly deposited in the National Science Museum, Tokyo, and the rest are possessed by the Biological Laboratory, Matsuyama Shinonome Junior College.

Genus *Podocinum* BERLESE (1882)

Key to Species of *Podocinum* in Japan

1. Dorsal shield provided with sixteen pairs of pilose setae, except verticals. Distance between bases of vertical setae less than their individual length. Dorsal shield covered by minute protuberances forming a polygonal network. (Fig. 5). ..... *P. pacificum* BERLESE
- Dorsal shield bears nineteen pairs of setae. Vertical setae further apart than their individual length ..... 2
2. One of the subterminal setae of tarsus I very long (Fig. 10). Dorsal setae well developed ..... *P. tsushmanum* sp. nov.
- Subterminal setae of tarsus I short..... 3

3. Dorsal shield with polygonal network of small protuberances which are connected by bridges one another (Fig. 19). Dorsal setae D1, D3–D7, L1–L5 and L7 are simple.....*P. catenum* sp. nov.
- Dorsal shield covered with large protuberances forming a polygonal network, but not connected with one another (Fig. 24). Dorsal setae D1, D3, L1 and L2 simple and the remaining setae pilose .....*P. aokii* sp. nov.

*Podocinum pacificum* BERLESE

(Figs. 1–6)

*Podocinum pacificum* BERLESE, 1896, p. 319; 1913, p. 83; EVANS et HYATT, 1957, p. 923; ATHIAS-HENRIOT, 1959, p. 28; WESTERBOER 1963, p. 203; ISHIKAWA, 1969, p. 62.

*Specimens examined:* Honshû: 1 ♀, Shiga Heights (1600 m), Nagano Pref., 19–X–1967, K. ISHIKAWA; 2 ♀, Shizumo, Nagiso, Nagano Pref., 20–VIII–1968, K. I.; 1 ♀, Shirahama, Wakayama Pref., 10–IV–1967, M. TANAKA.

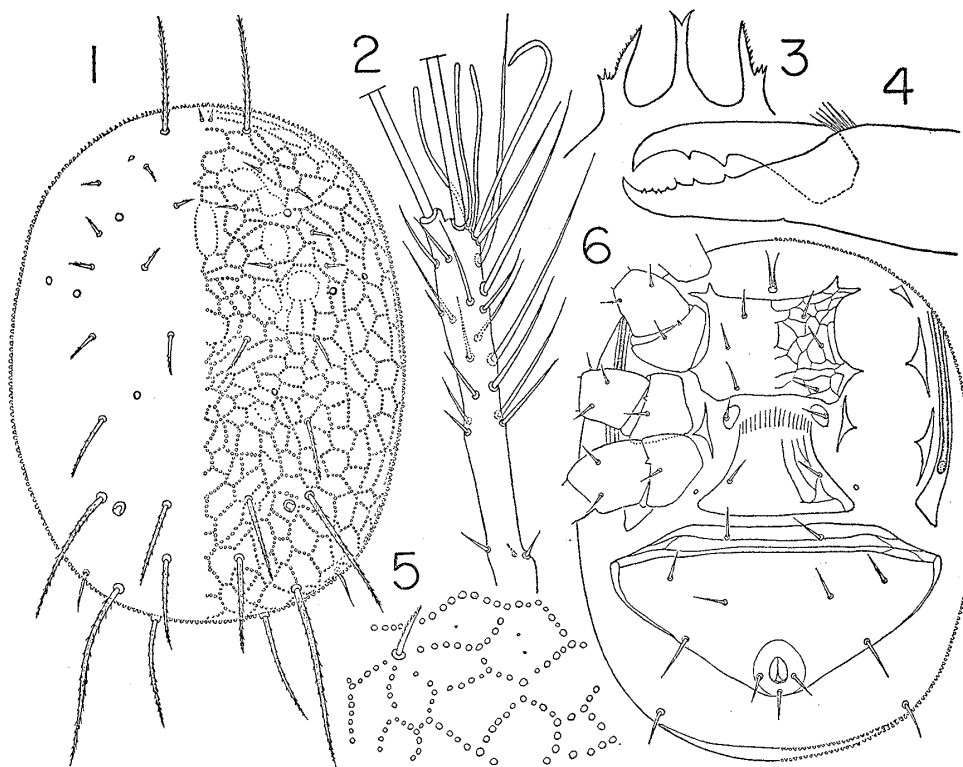
Shikoku: 2 ♀, Kyōga-mori, Matsuyama, Ehime Pref., 25–IV–1965, 2 ♀, 17–IV–1965, K. I.; 1 ♀, Kuwabara, Matsuyama, 28–I–1967, K. I.; 1 ♀, Sugitate, Matsuyama, 27–XI–1967, 2 ♀, 31–X–1968, K. I.; 1 ♀, Ono, Matsuyama, 30–VIII–1968, K. I.; 2 ♀, Kashima Island, Hōjō, Ehime Pref., 9–VII–1968, K. I.; 5 ♀, Hagiwara, Hōjō, 28–VII–1968, 3 ♀, 15–III–1969, T. WATANABE.

**FEMALE:** Length of idiosoma: 420 (439) 505  $\mu$ ; width at the level of coxae IV: av. 318  $\mu$ . Body oval, golden brown in color.

**Dorsum:** Dorsal shield entire, and covered by minute protuberances forming a polygonal network (Fig. 1). Anterior margin of dorsal shield serrated. The shield is provided with sixteen pairs of setae and with six pairs of pores. Distance between bases of vertical setae (D1) less than their individual length. Setae D2 and five pairs in the posterior part are stout and pilose. Length of setae: D1 12.5  $\mu$ , D2 105  $\mu$ , D5 21  $\mu$ , D6 30  $\mu$ , D7 80  $\mu$ , D8 90  $\mu$ , L1 18  $\mu$ , L2 21  $\mu$ , L3 19  $\mu$ , L4 30  $\mu$ , L5 55  $\mu$ , L6 160  $\mu$ , L7 170  $\mu$  and L8 93  $\mu$ . Arrangement of the setae and the pores is shown in Figure 1.

**Venter:** Tritosternum well developed. Sternal shield broader than long and bearing three pairs of simple setae. Metasternal shields oval, with a pair of simple setae. Epigynial shield wedge-shaped, with a pair of simple setae. Ventri-anal shield broader than long (237  $\times$  135  $\mu$ ); all the setae are simple. Interscutal membrane posterior to ventri-anal shield bears a pair of simple setae. Stigmata situated outside of coxae IV, and peritremes extend beyond coxae I. Peritrematal shield well developed.

**Gnathosoma:** Tectum trispinate, the median projection is forked distally, and the lateral ones denticulate externally. Pedipalp normal for the genus, specialized seta on palpal tarsus with three tines. Chelicera dentate, movable digit 45  $\mu$  in length, a pilus dentilis distinct, corniculus 33  $\mu$  in length.



Figs. 1-6. *Podocium pacificum* BERLESE, female. 1: Dorsal view. 2: Tarsus I. 3: Tectum. 4: Chelicera. 5: Ornamentation of dorsal surface. 6: Ventral view.

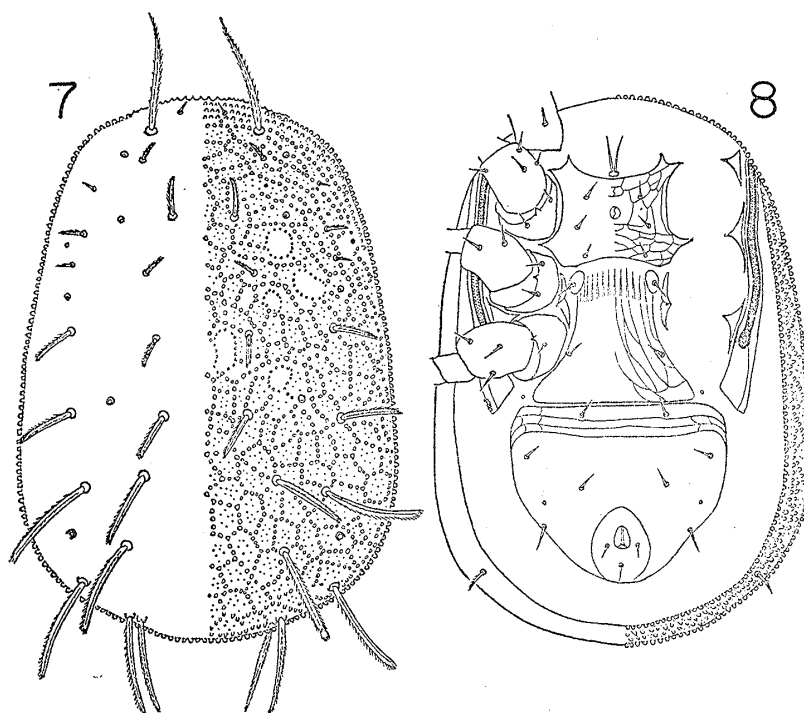
**Legs.** Tarsus I without ambulacrum, but with a pair of long terminal setae  $435\ \mu$ , and subterminal setae  $9\ \mu$ ,  $10\ \mu$ ,  $5\ \mu$  in length. Legs I: tarsus  $285\ \mu$ , tibia  $240\ \mu$ , genu  $278\ \mu$ , femur  $285\ \mu$ , trochanter  $58\ \mu$  and coxa  $70\ \mu$  in length. Legs II to IV each with well developed caruncle and claws. Leg I very long  $1216\ \mu$ , II  $674\ \mu$ , III  $620\ \mu$  and IV  $788\ \mu$ .

*Podocinuu tsushiuanum* sp. nov.  
(Figs. 7-13)

**Type-series:** Holotype female (MSJC-BL 101), allotype male, one paratype female and two paratype males, Mitake (490 m), Kamiagata, Tsushima Islands, Nagasaki Pref., 18-X-1968, J. AOKI.

**FEMALE:** Length of idiosoma:  $512$ ,  $515\ \mu$ ; width at the level of coxae IV: ca.  $350\ \mu$ . Body oval, golden brown in color.

**Dorsum:** Dorsal shield entire, and covered with a small protuberances forming a polygonal network. The polygonal areas are tuberculated. The shield bears nineteen pairs of setae and six pairs of pores. Vertical setae further apart than their individual length. Setae of D series except D1 are stout and pilose. Setae L1 and L2 weakly pilose and pointed sharply. Setae D1  $12\ \mu$ , D2  $112\ \mu$ , D3  $13\ \mu$ , D4  $40\ \mu$ , D5  $13\ \mu$ , D6  $32\ \mu$ , D7  $50\ \mu$ , D8  $76\ \mu$ , D9  $100\ \mu$ , D10  $100\ \mu$ , L1  $11\ \mu$ , L2  $27\ \mu$ ,



Figs. 7 and 8. *Podocinium tsushmanum* sp. nov., female. 7: Dorsal view. 8: Ventral view.

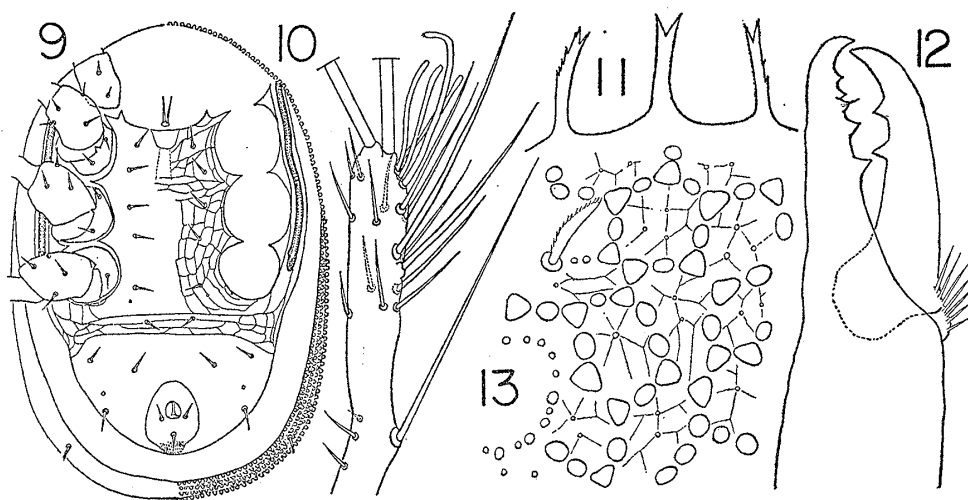


Fig. 9-13. *Podocinium tsushmanum* sp. nov., (9 male, 10-13 female). 9: Ventral view. 10: Tarsus I. 11: Tectum. 12: Chelicera. 13: Ornamentation of dorsal surface.

L3 13  $\mu$ , L4 38  $\mu$ , L5 60  $\mu$ , L6 100  $\mu$ , L7 25  $\mu$ , L8 105  $\mu$  and L9 91  $\mu$  in length.

*Venter*: Tritosternum bipartite, each setae simple, and its base very short. Sternal shield reticulated (77  $\times$  106  $\mu$ ) and provided with three pairs of simple setae. Metasternal shield free, with a pair of simple setae. Epigynial shield truncate posteriorly; genital setae simple. Ventri-anal shield (212  $\times$  163  $\mu$ ) sub-

triangular, with four pairs of pre-anal and three peri-anal setae simple. Stigmata located outside of coxae IV and peritremes extend beyond coxae I.

*Gnathosoma*: Tectum trispinate, each projection forked distally; the lateral ones denticulate externally. Pedipalp five segmented; specialized seta on palpal tarsus with three tines. Fixed digit of chelicera provided with two large and three small teeth, whilst movable digit ( $70\ \mu$ ) with two teeth. Corniculus  $42\ \mu$  in length.

*Legs*: Tarsus I has neither claw nor ambulacrum, but with a pair of long terminal setae  $460\ \mu$  in length. Leg. I: tarsus  $290\ \mu$ , tibia  $195\ \mu$ , genu  $290\ \mu$ , femur  $312\ \mu$ , trochanter  $67\ \mu$  and coxa  $70\ \mu$  in length. Leg II to IV each with ambulacrum. Leg I exceedingly long  $1220\ \mu$ , II  $710\ \mu$ , III  $615\ \mu$  and IV  $750\ \mu$ .

MALE: Length of idiosoma: 450, 452,  $460\ \mu$ ; width at the level of coxae IV: ca.  $300\ \mu$ .

Dorsal chaetotaxy and tuberculation similar to those of female. Genital orifice situated on the anterior margin of sternal shield. Holovenral shield bearing nine pairs of setae and peri-anal setae. Fixed digit of chelicera provided with two large teeth, whilst movable digit with one tooth and spermatophoral process.

Leg. I: tarsus  $263\ \mu$ , tibia  $187\ \mu$ , genu  $263\ \mu$ , femur  $271\ \mu$ , trochanter  $55\ \mu$ , and coxa  $63\ \mu$  in length. Length of leg I  $1102\ \mu$ , II  $638\ \mu$ , III  $562\ \mu$  and IV  $638\ \mu$ .

*Notes*: The form of the tarsus I is similar to that of *Podocinum sumatrense* EVANS et HYATT, 1957 from Kubaljani, Sumatra, but the latter has the following characteristics: smaller in size, dorsal shield  $341\text{--}363\ \mu$  long; the dorsal shield bears seventeen pairs of setae, of which D2 and six pairs in the posterior half of the shield are stout and ciliate, but the remaining setae are very short and simple; the anterior margin of the ventri-anal shield is concave.

*Podocinum catenum* sp. nov.

(Figs. 14–20)

*Type-series*: Holotype female (MSJC–BL 102), allotype male, two paratype females, Namekawa Valley, Ehime Pref., 21–VII–1968, K. ISHIKAWA; five paratype females, Nibukawa, Ochi, Ehime Pref., 23–XI–1968, K.I.; two paratype females, Mt. Omogo (1400 m), Ehime Pref., 16–IX–1968, K. MORIKAWA; one paratype female, Hoino, Shūsō, Ehime Pref., 15–XI–1967, K.I.

*Other specimens examined*: Hokkaido: 1 ♀, Misumai, Sapporo, 20–VII–1968, T. Fujikawa.

Honshū: 1 ♀, Mt. Gassan (1980 m), Yamagata Pref., 31–X–1968, K. NIJIMA; 2 ♀, Kusatsu, Gunma Pref., 23–VIII–1968, K.I.; 2 ♀, Managashi, Nagano Pref., 4–VI–1968, K.I.; 3 ♀, Mt. Kinkazan (120 m) Gifu Pref., Y. HORI; 1 ♀, Midoro, Kyōto Pref., 16–X–1967, K.I.; 1 ♀, Mihonoseki, Shimane Pref., 3–III–1968, T. OKUDA; 2 ♀, Sandan-Kyō Valley, Hiroshima Pref., 12–X–1968, K.I.; 3 ♀, Hagi, Yamaguchi Pref., 15–X–1968, N. KUBO; 6 ♀, Miyajima Island, Hiroshima Pref., 11–X–1968, K.I.; 3 ♀, Miyajima Island, 12–X–1968, K. MORIKAWA.

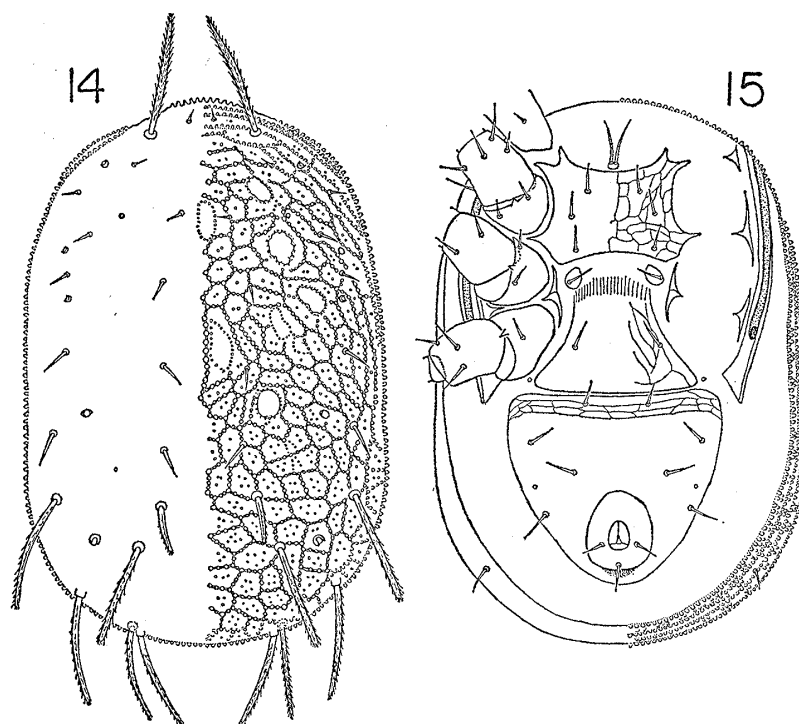


Fig. 14 and 15. *Podocinum catenum* sp. nov., female. 14: Dorsal view. 15: Ventral view.

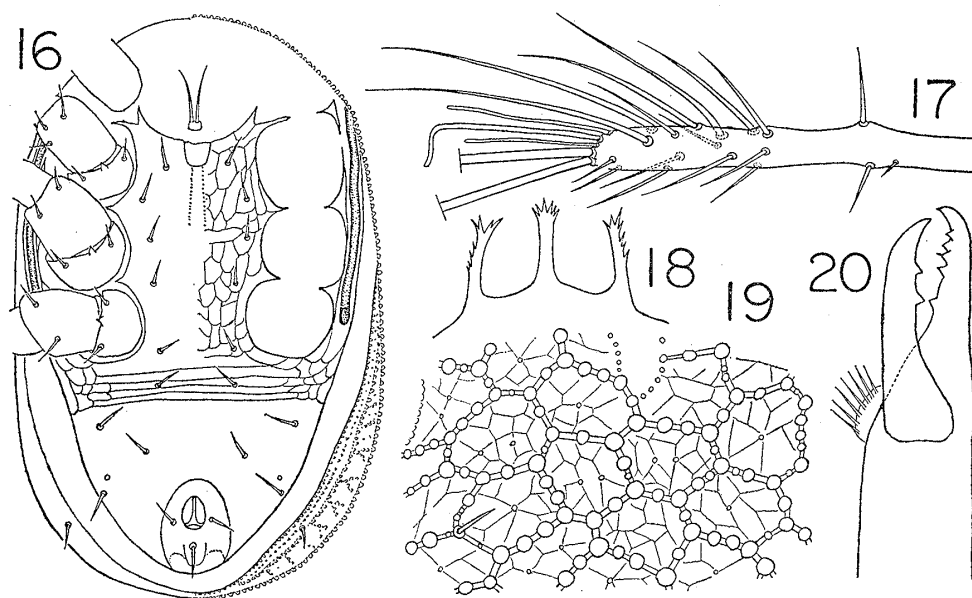


Fig. 16-20. *Podocinum catenum* sp. nov., (16 male, 17-20 female). 16: Ventral view. 17: Tarsus I. 18: Tectum. 19: Ornamentation of dorsal surface. 20: Chelicera.

Kyūshū: 5 ♀, Miyanoura, Yakushima Island, 12-II-1969, R. NAGANO.

Tsushima Islands: 3 ♀, 2 ♂, Waniura, Kamiagata, 15-X-1968, J. AOKI; 2 ♀, Ōura, Kamiagata, 15-X-1968, J. AOKI; 5 ♀, Ōmasu, Kamiagata, 16-X-1968, J. AOKI; 2 ♀, Sasuna, Kamiagata, 17-X-1968, J. AOKI; 5 ♀, Mt. Mitake (490 m), Kamiagata, 18-X-1968, J. AOKI; 2 ♀, Mine, Kamiagata, 20-X-1968, J. AOKI; 2 ♀, 1 ♂, Nita, Toyotama, Kamiagata, 21-X-1968, J. AOKI; 3 ♀, Mt. Mokokoku (516 m), Tsutsu, 23-X-1968, J. AOKI; 2 ♀, Mt. Ariake (558 m), Shimoagata, 24-X-1968, J. AOKI.

Shikoku: 1 ♀, Iwayaji, Ehime Pref., 26-IV-1967, K.I.; 1 ♀, Omogo Valley, Ehime Pref., 4-VII-1966, N. AKIMOTO, 1 ♀, 28-IV-1968, M. NAKAGAWA, 2 ♀, 16-VI-1968, K.I.; 1 ♀, Kamikuroiwa, Mikawa, Ehime Pref., 5-V-1968, M. DÔMOTO; 1 ♀, Shimotsuiki, Saijo, 29-VI-1968, K.I.; 1 ♀, Odamiyama, Ehime Pref., 3-XI-1968, K.I.; 5 ♀, Nibukawa, Ochi, Ehime Pref., 23-XI-1968, K.I.; 1 ♀, Sugitate, Matsuyama, 15-XII-1966, K.I.; 1 ♀, Yuyama, Matsuyama, 27-X-1968, K.I.; 2 ♀, Taisanji, Matsuyama, 1-VII-1968, T. SUNOUCHI; 3 ♀, 1 ♂, Shiroyama, Kochi City, 24-X-1968, K.I.; 1 ♀, Okinoshima Island, Kochi Pref., 16-II-1969, M. TANIGAWA.

**FEMALE:** Length of idiosoma: 394 (420) 481  $\mu$ ; width at the level of coxae IV: av. 279  $\mu$ . Body oval, golden brown in color.

**Dorsum:** Dorsal shield entire, and provided with polygonal network of small protuberances which are connected by bridges one another (Fig. 19). The shield bears nineteen pairs of setae, vertical setae further apart than their individual length. Setae D1, D3-D6, L1-L5, L7 are simple (setae D6, D7, L4, L7 sometimes slightly pilose). Length of setae D1 8  $\mu$ , D2 83  $\mu$ , D3 12  $\mu$ , D4 13  $\mu$ , D5 15  $\mu$ , D6 17  $\mu$ , D7 25  $\mu$ , D8 45  $\mu$ , D9 87  $\mu$ , D10 85  $\mu$ , L1 12  $\mu$ , L4 22  $\mu$ , L5 30  $\mu$ , L6 97  $\mu$ , L7 17  $\mu$ , L8 96  $\mu$  and L9 82  $\mu$ .

**Venter:** Tritosternum well developed, setae simple. Sternal shield reticulated, bearing three pairs of simple setae. Metasternal shields situated inside of coxae III, and a pair of simple setae. Epigynial shield truncate posteriorly, and base of shield wider than anterior margin. Ventri-anal shield sub-triangular, longer than wide (163  $\times$  131  $\mu$ ), and bears four pairs of pre-anal setae. Stigmata laying outside of coxae IV, and peritremes extending anteriorly beyond coxae I.

**Gnathosoma:** Tectum with a median extension distally divided, and lateral projections with several short spine externally. Pedipalp normal for the genus; palpal tarsus bears three-tined specialized seta. Fixed digit of chelicera with two large and three small teeth, and movable digit (50  $\mu$  in length) with two teeth. Corniculus 35  $\mu$  in length.

**Legs:** Tarsus I, without ambulacral apparatus, has a pair of long setae (430  $\mu$ ) apically; subterminal setae 18  $\mu$ , 10  $\mu$  and 5  $\mu$  in length. Leg I: tarsus 275  $\mu$ , tibia 183  $\mu$ , genu 240  $\mu$ , femur 265  $\mu$ , trochanter 52  $\mu$  and coxa 61  $\mu$  in length. Legs II to IV each with well developed caruncle and claws. Length of leg I 1076  $\mu$ , II 570  $\mu$ , III 473  $\mu$  and IV 578  $\mu$ .

MALE: Length of idiosoma: 350 (356) 360  $\mu$ ; width at the level of coxae IV: av. 240  $\mu$ .

Dorsal ornamentation and chaetotaxy similar to those in female. Genital orifice opening as shown in Fig. 16. Sterno-genital shield fused with endopodal, peritrematal and ventri-anal shields to form holovenral shield. Fixed digit of chelicera provided with two teeth, while movable digit with one tooth and spermatophoral process.

Leg. I: tarsus 255  $\mu$ , tibia 175  $\mu$ , genu 213  $\mu$ , femur 255  $\mu$ , trochanter 55  $\mu$  and coxa 60  $\mu$  in length. Length of leg I 1013  $\mu$ , II 500  $\mu$ , III 465  $\mu$  and IV 550  $\mu$ .

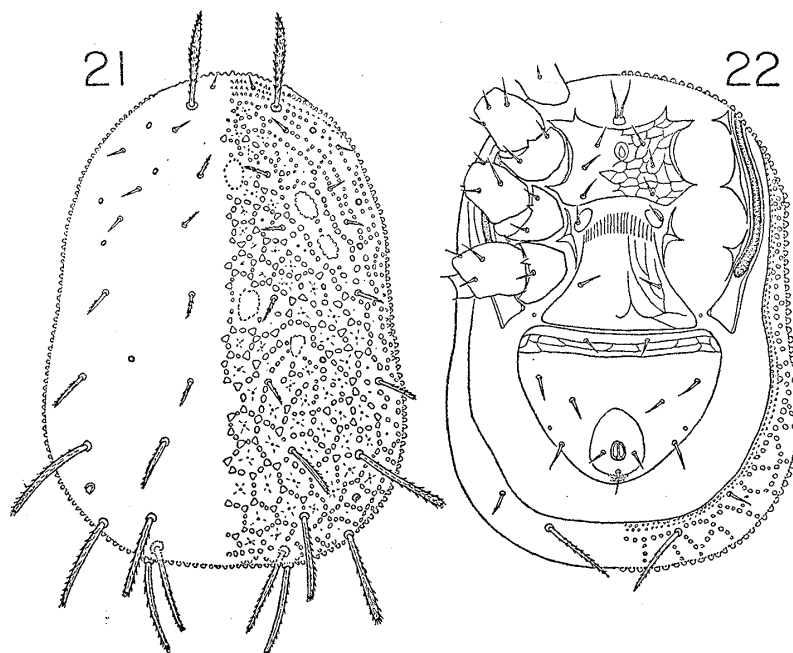
*Podocinum aokii* sp. nov.

(Figs. 21-29)

*Type-series*: Holotype female (MSJC-BL 103), allotype male, fourteen paratype females, Omogo Valley, Ehime Pref., 28-X-1967, K. ISHIKAWA; two paratype females, one paratype male, Sugitate, Matsuyama, 27-XI-1967, five paratype females, one paratype male, 1-IX-1968, K.I.; four paratype females, Mt. Omogo, 16-IX-1968, K. MORIKAWA; four paratype females, Omogo Valley, 23-IX-1968, M. TSURUHARA; eight paratype females, one paratype male, Yokomineji, Komatsu, Ehime Pref., 27-X-1968, K. OKUDA.

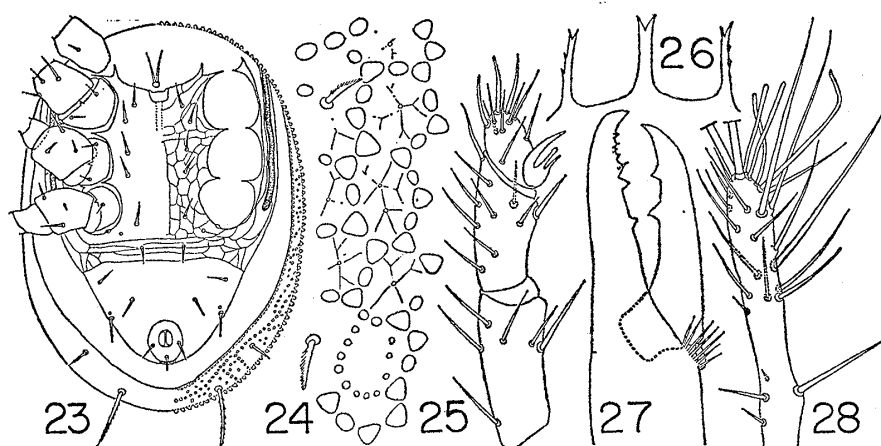
*Other specimens examined*: Hokkaido: 2 ♀, Misumai, Sapporo, 20-VII-1968, T. FUJIKAWA.

Honshū: 7 ♀, Shiga Heights, Nagano Pref., 19-X-1967, K.I.; 2 ♀, Donzokono-



Figs. 21 and 22. *Podocinum aokii* sp. nov., female. 21: Dorsal view. 22: Ventral view.





Figs. 23-28. *Podocinum aokii* sp. nov., (23 male, 24-28 female). 23: Ventral View. 24: Ornamentation of dorsal surface. 25: Pedipalp. 26: Tectum. 27: Chelicera. 28: Tarsus I.

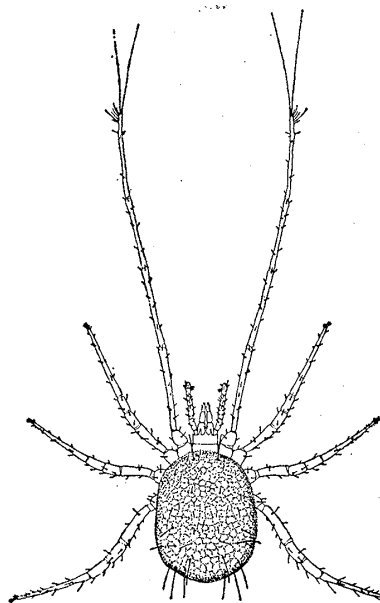


Fig. 29. *Podocinum aoki* sp. nov. female.

koike, Shiga Heights, 25-VIII-1968, K.I.; 2 ♀, Biwaike, Shiga Heights, 26-VIII-1968, K.I.; 1 ♀, Mt. Yokote (2305 m), Shiga Heights, 27-VIII-1968, K.I.; 1 ♀, Musashino, Tōkyō, 20-IX-1968, H. NAKAMURA; 4 ♀, Ashū, Miyama, Kyōto Pref., 18-IX-1968, H. WATANABE; 3 ♀, Goza, Mie Pref., 28-II-1969, K.I.; 4 ♀, Chizu, Yazu, Tottori Pref., 1-XI-1968, M. YONEI; 1 ♀, Hagi, Yamaguchi Pref., 15-X-1968, N. KUBO.

Kyūshū: 2 ♀, Hakozaki, Fukuoka, Fukuoka Pref., 3-VI-1967, M. TANAKA.

Tsushima Islands: 2 ♀, Mine, Kamiagata, Tsushima Islands, 20-X-1968, J. AOKI.

Shikoku: 2 ♀, 1 ♂, Kyōga-mori, Matsuyama, 25-IV-1965, 2 ♀, 6-XII-1968, K.I.; 1 ♂, Kawauchi, Ehime Pref., 11-VI-1965, 2 ♀, Y. OKUDA, 19-II-1966, Y. ISHIKAWA; 1 ♀, Kume, Matsuyama, 12-III-1966, K.I.; 2 ♀, Yuyama, Matsuyama, 27-X-1968, K.I.; 8 ♀, Sugitate, Matsuyama, 31-X-1968, K.I.; 1 ♀, Shimotsu-ike, Saijo, Ehime Pref., 29-VI-1968, K.I.; 5 ♀, Hoino, Shūsō, 5-XI-1967, K.I.; 9 ♀, 2 ♂, Nishiyama, Tanbara, Ehime Pref., 30-VIII-1968, K.I.; 2 ♀, Hagiwara, Hōjō, Ehime Pref., T. WATANABE; 5 ♀, 1 ♂, Opamiyama, Ehime Pref., 3-IX-1968, K.I.; 1 ♀, 1 ♂, Mt. Shiratsue (1150 m), Ehime Pref., 8-VII-1968, K.I.; 2 ♀, 1 ♂, Mt. Saragamine (1250 m), Ehime Pref., 3-VII-1967, Y. MASUDA, 1 ♀, 23-VI-1968, K.I.; 1 ♀, 1 ♂, Mt. Takanawa (986 m), 22-V-1968; 3 ♀, Mt. Narabara (1093 m), Ehime Pref., 23-XI-1968, K.I.; 3 ♀, Misaki, Nishiuwa, Ehime Pref., 16-III-1969, K. KIMURA; 1 ♀, 1 ♂, Ooshima Island, Niihama, Ehime Pref., 5-V-1968, Y. Ueno.

**FEMALE:** Length of idiosoma: 458 (470) 495  $\mu$ ; width at the level of coxae IV: av. 316  $\mu$ . Body oval, golden brown in color.

**Dorsum:** Dorsal shield entire, and covered with a pattern of small protuberances forming a polygonal network (Fig. 24). Anterior margin of dorsal shield serrated. The shield bears nineteen pairs of setae and six pairs of pores; vertical setae further apart than their individual length. Setae D2 and six pairs in the posterior half are stout and pilose. Setae D1, D3, L1, L2 and L3 are simple (Setae D3, L2 and L3 sometimes slightly pilose). Length of setae: D1 10  $\mu$ , D2 97  $\mu$ , D3 15  $\mu$ , D4 25  $\mu$ , D5 16  $\mu$ , D7 31  $\mu$ , D8 57  $\mu$ , D9 85  $\mu$ , L1 11  $\mu$ , L4 13  $\mu$ , L5 42  $\mu$ , L6 93  $\mu$ , L7 18  $\mu$ , L8 95  $\mu$  and L9 86  $\mu$ . Arrangement of the setae and the pores as shown in Figure 21.

**Venter:** Tritosternum bipartite, each setae simple, and its base exceedingly short. Sternal shield reticulated and carries three pairs of simple setae. Metasternal shields oval, with a pair of simple setae. Epigynial shield wedge-shaped, and genital setae simple. Ventri-anal shield (193  $\times$  155  $\mu$ ), subtriangular, furnished with four pairs of pre-anal and three peri-anal setae, all setae simple. Stigmata located outside coxae IV, and peritremes extending beyond coxae I.

**Gnathosoma:** Tectum consisted of three projections, the median one being forked distally and the lateral ones denticulate externally. Pedipalp normal for the genus, specialized seta on palpal tarsus with three tines. Fixed digit of chelicera provided with two large and five small teeth, whilst movable digit (62  $\mu$ ) with two teeth. A pilus dentilis distinct. Corniculus 39  $\mu$  in length.

**Legs:** Tarsus I has neither claw nor ambulacrum, but is provided with a pair of long terminal setae (435  $\mu$ ), and subterminal setae 30  $\mu$ , 12  $\mu$ , 7  $\mu$  in length. Leg I: tarsus 300  $\mu$ , tibia 195  $\mu$ , genu 285  $\mu$ , femur 295  $\mu$ , trochanter 56  $\mu$  and coxa 65  $\mu$  in length. Legs II to IV each with well developed caruncle and claws. Length of leg I 1205  $\mu$ , II 658  $\mu$ , III 605  $\mu$  and IV 690  $\mu$ .

**MALE:** Length of idiosoma: 375 (400) 410  $\mu$ ; width at the level of coxae IV:

av. 270  $\mu$ .

Dorsum similar to that of female, though somewhat smaller than in female. Tritosternum normal for the genus. Genital orifice opening on the anterior margin of sternal shield. Holoventral shield fused with endopodal and peritrematal shields, all of the ventral setae simple. Movable digit of chelicera provided with one tooth and spermatophoral process, while fixed digit with two teeth; a pilus dentilis distinct.

Leg I: tarsus 268  $\mu$ , tibia 185  $\mu$ , genu 245  $\mu$ , femur 250  $\mu$ , trochanter 57  $\mu$  and coxa 63  $\mu$  in length. Length of leg I 1068  $\mu$ , II 636  $\mu$ , III 525  $\mu$  and IV 638  $\mu$ .

*Notes:* The present species is one of rather common mites in humus, and widely distributed in Japan.

#### ACKNOWLEDGMENT

I wish to express my gratitude to Prof. Dr. Kuniyasu Morikawa of the Matsuyama Shinonome Junior College for his constant guidance in the course of the study. Sincere thanks are due to Dr. J. Aoki of the Department of Zoology of the National Science Museum, Tokyo, who kindly gave me the chance to examine material from the Tsushima Islands and valuable suggestions. I am also indebted many persons for their kind helps in offering me rich material.

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